Virginia Department of Transportation

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Asset Management System

Project Charter

Document 100

Version 2.1

Prepared by:
Information Technology Applications Division

Document History Page

Description	Contributor(s)	Date
Version 1.0 – Draft prepared.	Joe Pugh Tim Cramer	Feb 2003
Version 1.0 – Accepted by project team.		Mar 2003
Version 1.1 – Revised for consistency with the Project Proposal.	Susan Hutton	Jun 2003
Version 1.2 – Revised to include changes from Joe Pugh and Rob Hanson.	Susan Hutton	7/6/2003
Version 1.3 – Revised to include additional changes from Rob Hanson.	Susan Hutton	7/16/2003
Version 2.0 – Added Steering Committee member list. Signed by Project Sponsor.	Susan Hutton	7/25/2003
Version 2.1 – Replaced Frank Gee with Mal Kerley as the project sponsor and changed the Steering Committee Chairperson to Jim Smith, Acting	Susan Hutton	9/10/2003

Project Charter

A. General Information

Provide basic information about the project including: Project Title – The proper name used to identify this project; Project Working Title – The working name or acronym that will be used for the project; Proponent Secretary – The Secretary to whom the proponent agency is assigned or the Secretary that is sponsoring an enterprise project; Proponent Agency – The agency that will be responsible for the management of the project; Prepared by – The person(s) preparing this document.

Project Title:	Asset Management System	*Project Working Title:*	Asset Management System
Proponent Secretary:	Hon. Whit Clement, Secretary of Transportation	*Proponent Agency:*	VDOT
Prepared by:	Joe Pugh, ITAD	*Document Number:*	100

Points of Contact

List the principal individuals who may be contacted for information regarding the project.

Position	Title/Name/Organization	Phone	E-mail
Project Sponsor	Malcolm Kerley, P.E., Chief Engineer for Program Development	(804) 786-4798	Mal.Kerley@VirginiaDOT.org
Program Manager	Jim Smith, Acting for Quintin Elliott	(804) 786-4244	Jim.Smith@VirginiaDOT.org
Project Manager	Rob Hanson - Business Joe Pugh – Technical	(804) 371-2978 (804) 225-4915	Robert.Hanson@VirginiaDOT.org Joe.Pugh@VirginiaDOT.org
Proponent Cabinet Secretary	Hon. Whit Clement, Secretary of Transportation	(804) 786-8032	sectrans@gov.state.va.us
Proponent Agency Head	Philip A. Shucet	(804) 786-2700	Philip.Shucet@VirginiaDOT.org
Customer (User) Representative(s)	Tammy Thomas Asset Management Division	(804) 692-0460	Tammy.Thomas@VirginiaDOT.org
Other	Dennis Shea – Business Chuck Larson - Data	(804) 786-7924 (804) 371-2965	Dennis.Shea@VirginiaDOT.org Chuck.Larson@VirginiaDOT.org

B. Executive Summary

An Executive Summary is required when Sections C thru G of the charter are excessively long. In two or three paragraphs, provide a brief overview of this project and the contents of this document.

N/A

C. Project Purpose

Explain the business reason(s) for doing this project. The Project Purpose (the Business Problem and Project Business Objectives) is in the Project Proposal, Section B.

1. Business Problem

The Business Problem is a question, issue, or situation, pertaining to the business, which needs to be answered or resolved. State in specific terms the problem or issue this project will resolve. Often, the Business Problem is reflected as a critical business issue or initiative in the Agency's Strategic Plan or IT Strategic Plan.

VDOT must develop an Asset Management System that permits identification and condition of high-value assets (e.g. Pavement, Bridges, Roadside, etc.) and application of condition standards that will establish both strategic and operational performance targets for each asset group. Currently, there is no system or process to accomplish these tasks for all assets statewide. For VDOT to effectively improve the management of these high-value assets, decision tools such as a Needs-Based Budget Request System, Work Order System, Work Accomplishment System, Inventory Model, Condition Assessment Model, Cost Model, and Repair Models must be developed. These tools will enable VDOT to more efficiently and effectively manage roadway assets. In addition, it will move the Asset Management operations into full compliance with the APA Audit, JLARC 273 and other internal and external audits, examinations and legislative directives, while allowing for the reporting of accurate figures with regard to inventory counts, conditions, location, and budget required for asset management.

2. Project Business Objectives

Define the specific Business Objectives of the project that correlate to the strategic initiatives or issues identified in the Commonwealth or Agency Strategic Plan. Every Business Objective must relate to at least one strategic initiative or issue and every initiative or issue cited must relate to at least one project business objective.

Commonwealth or Agency Strategic Plan – Initiative or Critical Issue	Project Business Objectives
Age / condition of current facilities	1. Collect and maintain accurate and timely information on transportation infrastructure asset inventory and condition assessment.
Re-authorization / reallocation formula	2. Develop statewide budget request based on asset needs identified during assessment period. 3. Plan and prioritize work taking into account resource constraints.
Identifying acceptable levels of performance for assets	4. Improve cost effectiveness and efficiency of maintenance and operations. 5. Determine the impact of deferred maintenance.

	6. Determine the costs of raising and lowering operational performance targets. 7. Measure work accomplishment and determine maintenance of asset throughout its lifecycle. 8. Completing the Needs-Based Budgeting Request System Module will put VDOT in compliance with APA, JLARC and other audit findings and recommendations.

D. Assumptions

Assumptions are statements taken for granted or accepted as true without proof. Assumptions are made in the absence of fact. List and describe the assumptions made in the decision to charter this project.

Upper management support exists for creation of a new system to address the business objectives of this project.

The budget, resources, and other development support that is required to initiate and complete this project is made available to the Project Managers on a timely basis.

Cooperation from all districts, residencies, Central Office divisions, etc., is present throughout the project.

E. Project Description, Scope and Management Milestones

1. Project Description

Describe the project approach, specific solution, customer(s), and benefits. The Project Description is located in the Project Proposal, Section C.

For assets where the inventory information is not available, the business approach is to perform a random sampling of assets in order to determine asset density and condition. The asset density will be extrapolated to estimate inventory statewide. The asset conditions from the samples will be applied to the extrapolated inventory to determine the estimated amount of work needed. The system will be comprised of the following modules that will be developed incrementally; Random Condition Assessment, Needs-based Budget Request, Planning & Scheduling, Work Orders, Accomplishment & Monitoring, Inventory, and Analysis Tools. Customers being served by this system are; Asset Managers, Financial Planners, Research groups, Strategic Planners, and Executive Staff. Expected benefits are more accurate planning, budgeting, as well as increased efficiency, and resource utilization.

2. Scope

The Project Scope defines all of the products and services provided by a project, and identifies the limits of the project. In other words, the Project Scope establishes the boundaries of a project. The Project Scope addresses the who, what, where, when, and why of a project.

In a joint effort, Central Office staff in the Asset Management and Information Technology Applications Divisions will manage the project as well as design and develop the modules that make up this system with the desire and intention of addressing all the stated business objectives while using the scarce financial and personnel resources to optimal efficiency. Other groups in Asset Management field offices will collect asset data, contribute to defining business rules, and review business models.

The project will follow the management guidelines and principles set forth by the *Commonwealth of Virginia Guideline for Project Management* and any policies or procedures issued by the Secretary of Technology that apply to VDOT's Major IT Projects.

The development methodology features the following:

- Incremental delivery- all work is paced for three-month delivery windows, such that a critical piece of the total project is rolled-out each 90 days.

- Outside in Design – Begins with prototypes that are refined in an iterative process. The design consists of seven development efforts; Random Condition Assessment Module, Needs-based Budget Request Module, Planning & Scheduling Module, Work Orders, Accomplishments & Monitoring Module, Inventory Module, and Analysis Tools.

- Small Teams – A team of about six developers assisted by four to five Asset Management business experts will build the system.

- User Feedback – A mechanism to survey managers and business experts in field offices will be used to help validate aspects of the design. In addition, an automated forum will allow Asset Management staff throughout the agency to review and critique design elements, and help ensure project adherence to business requirements.

The architecture shall be designed within the following boundaries:

- Maximize utilization of existing systems - This is necessary for a quick implementation. It will primarily be achieved through data exchanges with the existing systems.

- Development based on technologies in which VDOT has experience - This is necessary since we intend to utilize current staff (VDOT & Contractors) for development. It can be achieved by pulling a select group of employees from different areas - employees who have had good exposure to the technologies necessary for this project.

- Maximize utilization of existing hardware - This is necessary not only for budget reasons but also because of long lead times for server procurement. This can be achieved through server consolidation for existing applications. The only exceptions may be data collection devices that will be dealt with separately.

- Design for Code Reusability – Small generic components will be developed that can be used across multiple system modules.

- Data Driven Architecture – The system will be designed so that application code will not change due to the evolution of business processes.

The expected completion of this project is November 2004.

3. Summary of Major Management Milestones and Deliverables
Provide a list of Project Management Milestones and Deliverables (see Section E of the Project Proposal Document). This list of deliverables is not the same as the products and services provided, but is specific to management of the project. An example of a Project Management Milestone is the Project Plan Completed.

Event	Estimated Date	Estimated Duration
Project Charter Approved	March 1, 2003	
Project Plan Completed	July 18, 2003	
Project Plan Approved	July 25, 2003	
Project Execution – Started	July 28, 2003	
Project Execution Completed	October 31, 2004	
Project Closed Out	November 30, 2004	

F. Project Authority
Describe the authority of the individual or organization initiating the project, any management constraints, management oversight of the project, and the authority granted to the Project Manager.

1. Authorization
Name the project approval authority that is committing organization resources to the project. Identify the source of this authority. The source of the approval authority often resides in code or policy and is related to the authority of the individual's position or title.

Dr. Gary Allen, Chief of Technology, Research & Innovation
Mr. Malcolm Kerley, Chief Engineer for Program Development

2. Project Manager
Name the Project Manager and define his or her role and responsibility over the project. Depending on the project's complexities, include how the Project Manager will control matrixed organizations and employees.

Robert A. Hanson, P.E., Asst. Director for Systems Development, Asset Management Division will assume the responsibilities for managing project activities performed by business staff in the Asset Management Division. Some of these activities include defining user requirements, collecting asset data, developing business models, designing and testing prototypes, and training users. He will coordinate with the Technical Project Manager to approve project deliverables

and ensure that the project is successfully executed, completed on time, within budget, and at an acceptable level of quality.

Joe Pugh, Applications Manager, Information Technology Applications Division will assume the responsibilities for managing project activities performed by technical staff in the Information Technology Applications Division. These activities involve such things as designing and building the technical architecture, developing applications that meet user specifications, configuring system components, performing all levels of system testing, and creating backup and recovery procedures as well as creating technical documentation. He will coordinate with the Business Project Manager to approve project deliverables and ensure that the project is successfully executed, completed on time, within budget, and at an acceptable level of quality.

3. *Oversight*
Describe the Commonwealth or Agency Oversight controls over the project.

The AMS project will adhere to the oversight policies and procedures for Major IT Projects as required by the Virginia Information Technology Agency (VITA) and the Commonwealth's Chief Information Officer.

VDOT Executive Management will perform periodic reviews to assure the project is meeting its objectives within the time and budget proposed.

VDOT Internal Audit may review system deliverables and make recommendations.

4. *Steering Committee*

Position	Name	Phone	E-mail
Chairperson	Jim Smith Acting	786-4244	Jim.Smith@VirginiaDOT.org
Program Manager	Jim Smith, Acting	786-4244	Jim.Smith@VirginiaDOT.org
IT Division Head	Murali Rao	786-9702	Murali.Rao@VirginiaDOT.org
Business Project Mgr.	Rob Hanson	371-2978	Robert.Hanson@VirginiaDOT.org
Technical Project Mgr.	Joe Pugh	225-4915	Joe.Pugh@VirginiaDOT.org
District Maintenance Engr.	Morteza Salehi	703-383-2459	Morteza.Salehi@VirginiaDOT.org
Mobility Mgmt. Division Head	Ray Khoury	786-2965	Raymond.Khoury@VirginiaDOT.org
VITA	George Williams	371-2771	George.Williams@VITA.Virginia.gov
Technical Lead (non-voting)	Naveed Sami	786-0765	Naveed.Sami@VirginiaDOT.org
Customer Representative (non-voting)	Tammy Thomas	692-0460	Tammy.Thomas@VirginiaDOT.org

G. Project Organization

1. Project Organization Chart
Provide a graphic depiction of the project team. The graphical representation is a hierarchal diagram of the project organization that begins with the project sponsor and includes the project team and other stakeholders.
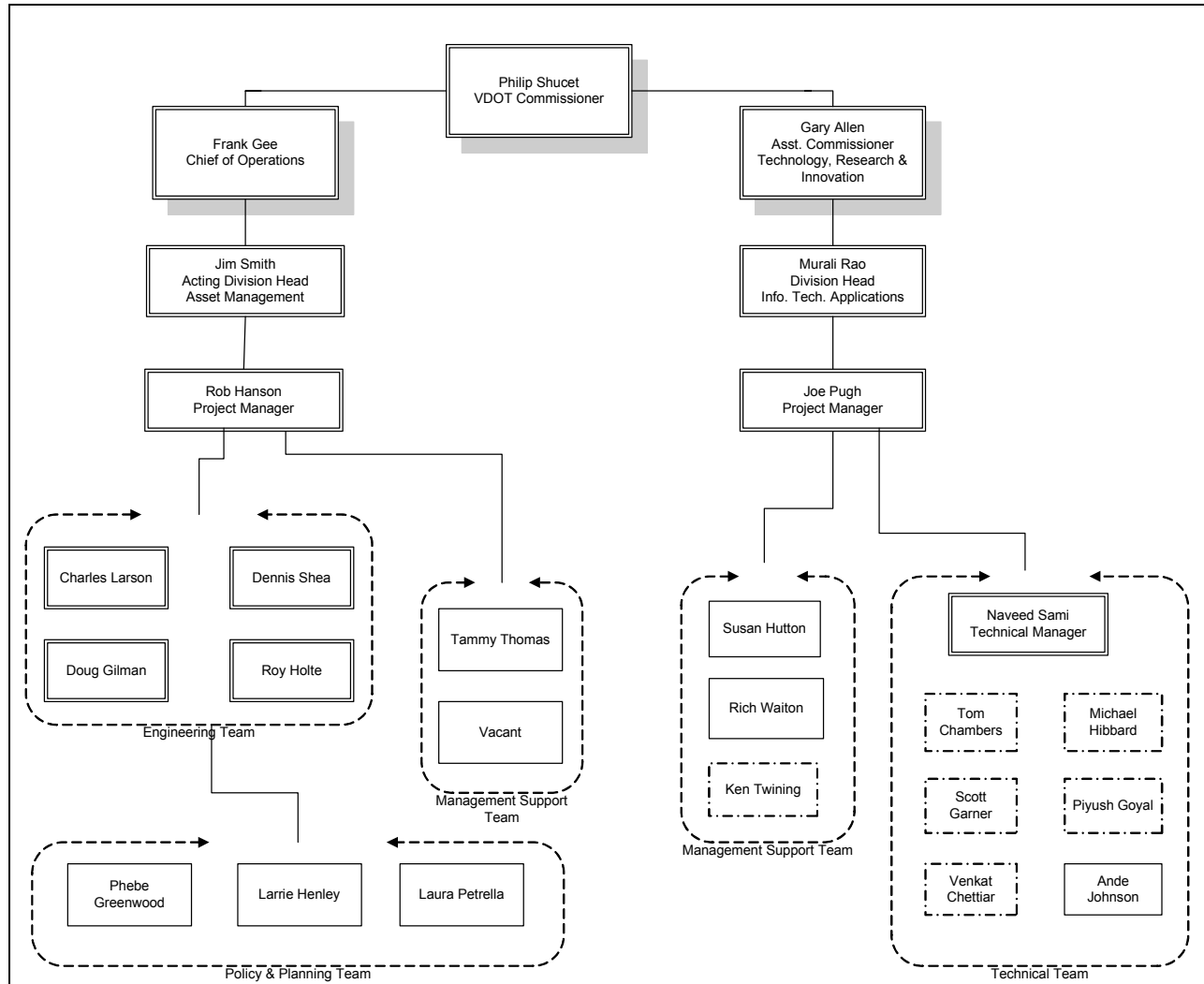
2. Organization Description
Describe the type of organization used for the project team, its makeup, and the lines of authority.

The Asset Management Division and the Information Technology Applications Division are jointly managing this project. It can be described as a "mixed organization" because it is a combination of a projectized and functional organization. The project was originally started in the Maintenance Division (now known as Asset Management) and went through a variety of transformations over several years. In December 2002, due to VDOT organizational changes, severe cutbacks in resources, and the need to address APA recommendations within aggressive timelines, there was a revision in the project's scope and direction. VDOT's Information Technology Applications Division assumed a more prominent role in helping to manage the project and to provide resources for rapid development of system modules. The Information Technology Applications Division has formed a project team of full-time technical personnel who will report to the Technical Project Manager. The Asset Management Division will provide business experts who will report to the Business Project Manager.

3. Roles and Responsibilities
Describe, at a minimum, the Roles and Responsibilities of all stakeholders identified in the organizational diagram above. Some stakeholders may exist whom are not part of the formal project team but have roles and responsibilities related to the project. Include these stakeholders' roles and responsibilities also.

Executive Management –

Management provides overall guidance and support for the project, with oversight responsibility for expenses and resource allocation. Also, ensure that scope of project remains within the established goals and vision, and resolves organizational and priority conflicts. A schedule will be established for formal reviews to assess the project's progress every 2-3 months.

Functional Managers –

Management identifies the need for the project and requests approval for the project investment from Executive Management. They provide guidance and support and are responsible for project expenses and resource allocation within their Division. They assess project risks and see that appropriate mitigation strategies are implemented as necessary.

Business Project Manager – See F.2 above.

Business Team Members –

Responsible for the identification, documentation and review of all requirements necessary to make the system work as envisioned by management and asset management users. Provide detailed business cost models, and models for the repair and replacement of assets. Perform Quality Assurance on asset data collected in the field. Work with the Application Developers to create data models. Test prototypes and provide feedback to the development team. Perform

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User Acceptance Testing of the final system modules to ensure correct functionality per the requirements.

Technical Project Manager – See F.2 above.

Technical Team Members –

Work with Asset Management personnel, users, and Business Analysts to create operational programs and system modules per the requirements specifications presented by the business unit. Prepare the system modules for testing. Integrate changes and fixes required for complete operability to specification. Perform all system testing functions as required, and assist with User Acceptance Testing. Document the system completely, and turn over to production upon user acceptance.

Project Management Support Teams –

Work directly with Project Managers to construct, document, and maintain the project plan, project schedule, budget, and all other management deliverables. Set up team meetings, record meeting minutes and action items, assist with presentations, and provide status reports. Complete all forms required for VITA project oversight. Provide auditors with project information as requested. Enter and maintain project information in the ITAD Project Tracking System.

Asset Management Users –

Assist with the development of business models and with the collection of asset data. Verify and validate that the business models are consistent with industry best practices and engineering principles. Help perform User Acceptance Testing. Use the system, once implemented, to better manage the maintenance and repair of VDOT's highway assets.

VDOT Financial Staff -

Help determine Needs-Based Budget Request reporting requirements. Review system output for validity.

VDOT Internal Audit –

Provide project oversight for adherence to systems development methodology.

VA Information Technology Agency (VITA) Oversight Committee –

Provides recommendations to VDOT leaders regarding project continuance, management, baselines (performance, cost, schedule), periodic reviews, and any additional follow-up actions required to ensure the success of the project.

H. Resources

Identify the initial funding, personnel, and other resources, committed to this project by the project sponsor. Additional resources may be committed upon completion of the detailed project plan.

Resources	Allocation and Source
Funding	Non-General Funds Project Estimate at Completion: $2.05 million
Project Team (Full and Part Time Staff)	2 project managers, 1 lead technical manager, 6 application developers, and 7 business analysts, 5 project support personnel
Customer Support	Project team will provide support during development and transitioned to CO Help Desk after full implementation
Facilities	VDOT Central Office facilities
Equipment	VDOT owned and leased equipment
Software Tools	.NET(C#), Database will be Oracle9i, Microsoft 2000 OS, ESRI GIS technologies
Other	

I. Signatures

The Signatures of the people below document approval of the formal Project Charter. The Project Manager is empowered by this charter to proceed with the project as outlined in the charter.

Position/Title	Signature/Printed Name/Title	Date
Proponent Cabinet Secretary (as required)	Hon. Whit Clement, Sec. of Transportation	
Proponent Agency Head	Philip A. Shucet, Commissioner of VDOT	
Project Sponsor (required)	Malcolm Kerley, P.E., Chief Engineer of Program Development	
Program Manager	Jim Smith, Acting, Asset Management Division Head	
Project Manager (required)	Robert Hanson, Asst. DA for Systems Development	
Project Manager (required)	Joe W. Pugh, Technology Program Manager	